

The majority of these patients had improved right ventricular function post thrombolysis. This small cohort study demonstrates the variability in the clinical presentations and physiological manifestations of massive PE, hence the need for early specialist input. The algorithm is an effective tool in identifying high mortality risk patients and those likely to develop pulmonary hypertension, thus allowing early specialist review and intervention.

## Cough measurement, mechanisms and treatment

### P150 THE DEVELOPMENT OF A COUGH HYPERSENSITIVITY QUESTIONNAIRE (CHQ)

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**Introduction and objectives** Cough reflex hypersensitivity (CRH) is a key feature of most patients with a refractory chronic cough and has distinct clinical features of hypertussia, allotussia (cough due to nontussive stimuli e.g. talking) and laryngeal paraesthesia (throat tickle). Cough challenge tests, the gold standard used to identify CRH, are limited for clinical use because of the wide overlap between healthy subjects and chronic cough. We aimed to develop a patient reported cough hypersensitivity questionnaire (CHQ) to identify abnormal CRH symptoms and evaluated it in subjects with and without cough.

**Methods** The CHQ was developed following literature review, MDM and patient interviews. It assessed the presence and severity of cough triggers and laryngeal sensations on a Likert scale. It contained 35 items, score range 0–150. 38 Subjects (16 healthy, 10 refractory chronic cough (RCC: rhinitis, gastro-oesophageal reflux

disease, asthma/eosinophilic bronchitis) and 12 respiratory disease (RD: bronchiectasis, sarcoidosis, interstitial lung disease and emphysema) with cough) completed the CHQ, LCQ (health status), capsaicin cough reflex sensitivity (C5) and urge to cough VAS during capsaicin test.

**Results** Capsaicin cough reflex sensitivity, compared to healthy subjects, was increased in both RCC (geometric mean(logSD) C5 for RCC 18.1 (1.1) vs Normal 134.3 (0.8)  $p=0.0084$ ) and RD ( $p=0.0126$ ); figure 1. CHQ scores were raised in RCC compared to healthy subjects ( $p=0.0001$ ) and RD ( $p=0.0068$ ), figure 1. The upper limit of normal for CHQ score was 46. CHQ identified subjects with RCC better than C5. There was no significant relationship between CHQ and age or gender. CHQ was associated with logC5 (all subjects)  $r=-0.33$ ,  $p=0.045$  and health status (LCQ in RCC and RD)  $r=-0.58$ ,  $p=0.006$ . There were no significant differences in mean(SD) urge to cough VAS during capsaicin test between subjects; healthy 52(25), RCC 39(24) and RD 54(29);  $p=0.2317$ .

**Conclusion** In conclusion, this preliminary study suggests that laryngeal sensations and cough triggers assessed with the CHQ may identify patients with CRH. Further work is needed to repeat the study in a larger number of subjects, investigate whether the number of CHQ items could be reduced and to develop better objective tests of CRH.

### P151 LARYNGOPHARYNGEAL PEPSIN REFLUX IN PATIENTS WITH UPPER AIRWAY SYMPTOMS

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**Background** Laryngopharyngeal reflux (LPR) is implicated in inducing laryngeal hyper-responsiveness which is a unifying feature underlying chronic cough and vocal cord dysfunction. A lack of response to standard anti-reflux therapy in patients with LPR may

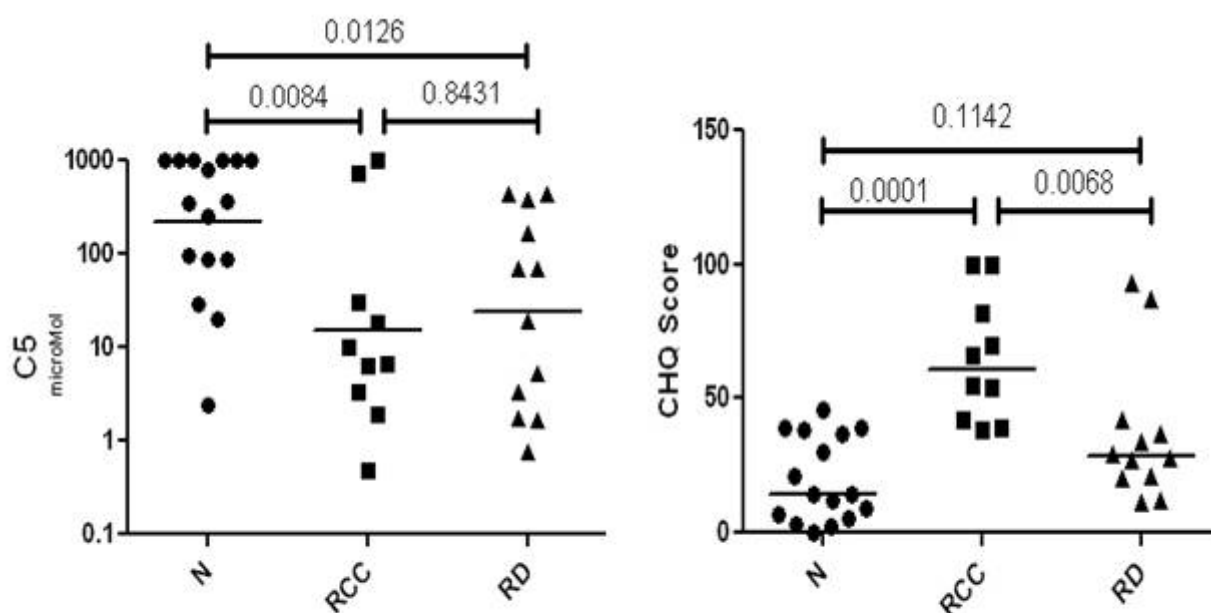


Figure 1. Objective and subjective assessment of cough reflex hypersensitivity. C5: capsaicin cough reflex sensitivity; CHQ: cough hypersensitivity questionnaire; N: normal; RCC: refractory chronic cough; RD respiratory disease.

Abstract P150 Figure 1